dition affecting the climate. A plateau of the same height and latitude closely surrounded by an ocean would have a very moist and cloudy climate, and if a little higher up would be covered with snow and glaciers. The conditions that favor the formation of glaciers or permanent fields of snow on such a large scale as once prevailed in eastern North America, can be elucidated by the comparison of the Wyoming plateau with surrounding lowlands. Mr. W. S. Palmer, Section Director for Wyoming, has added to his tables a number of stations outside of the State, and, perhaps, a few more would bring out the general climatological relations that we have in mind.

NEW METEOROLOGICAL TERMS.

Occasionally a word that is new to the Editor is found in the reports of our observers, or in the newspaper and popular literature of the day. Past experience shows that these words may, many years hence, crop up again as proper meteorological terms in use over wide areas. Much labor has been spent in hunting up the origin of the word "blizzard," and we shall probably do a favor to a future generation of historians, if we make a permanent record of these words which are, at present, in very local usage only.

In the January report of the Tennessee section, Mr. H. C. Bate, Section Director, publishes the report of the voluntary observer at Grace, Tenn., to the effect that "the first day of the year is a very cold one; a small 'skift' of snow fell and there was a very cold north wind."

We hope to receive the exact definition and usage of this word "skift."

WINTER THUNDERSTORMS IN MISSISSIPPI.

In the January report of the Mississippi Section, Mr. H. E. Wilkinson, Section Director, states:

Thunderstorms in midwinter are not unknown in the lower Mississippi Valley, but it seldom happend that such an electric disturbance as that of December 10, 1899, occurs, even in summer. During the past ten years nine thunderstorms have been recorded at Vicksburg during the month of December; in some cases two in one month, and in three cases none during the month. The records for twenty-nine years show but eight cases where over 5 inches of rain fell in twenty-four hours and but four cases where the rain was heavier than on December 10. At Vicksburg on this date the thunder and lightning held sway throughout the day and into the night. The morning chart of December 9 showed a moderate depression central over Oklahoma and central Kansas. At 8 p. m. of the 9th this had spread over a large area from Iowa to Texas. By 8 p. m. of Sunday, the 10th, the depression had contracted in area and increased in depth until the barometer reached 29.58 at Little Rock, Ark. At Vicksburg heavy rain fell from early in the morning of the 10th, without intermission, throughout the day, accompanied at times by vivid lightning and terrific thunder. The climax was reached by 5 p. m. The line of 8 inches of rainfall or more was confined to the southwestern counties of the State, the major portion falling between 10 a. m. and 10 p. m. Sunday.

SNOWFALL IN THE ROCKY MOUNTAINS.

In the January report of the Colorado section Mr. F. H. Brandenburg, Local Forecast Official and Section Director, gives his usual summary of the snowfall in the mountains. When these reports have been accumulated for a few years, they will form an invaluable fund of data for the investigation of the laws controlling not only the fall but especially the accumulation of snow in the formation of glaciers. Warm rains, warm sunshine, and dry winds eat up the snow that falls in Colorado so that glaciers are scarcely possible under existing conditions. A slight modification of these conditions made immense glaciers possible in the Rocky Mountain region, and especially in the Lake region and the northern Appalachians during the glacial epoch of geology. Mr. Brandenburg reports that at the close of the current January the depth of snow was only from one-third to one-half as much as at the end of January, 1899, for stations between 7,500 and 10,000 feet, but that for stations in the vicinity of timber line the ratio ranges from one-third to two-thirds. Among the reports of deep snows lying on the ground at the end of the month at timber line we quote the following:

	Inches.
Arkansas watershed:	
Colddale, Fremont County	72
Menger, Las Animas County	[1]72
South Platte watershed:	
Bailey, Park County	36
Jefferson, Park County	36
Rio Grande watershed:	
Wagon Wheel Gap, Mineral County	36
Alder, Saguache County	36
Gunnison watershed:	
Iola, Gunnison County	48
White Pine, Gunnison County	40
Grand watershed:	
Ivanhoe, Pitkin County	60
Watson, Pitkin County	[1]72
Crystal, Gunnison County	84

In the January report of the Idaho section, Mr. S. M. Blandford, Section Director, gives some statistics relative to snow, from which we copy the following:

In general the snowfall is decidedly deficient; it is only in the mountains of Bear Lake and Oneida counties, in the southeastern corner of the State, that the snowfall has approached the average. For comparison with the data in Colorado we copy the following from among the larger figures giving the depth of snow on the ground at the end of the month at timber line:

	Inches.
Snake River watershed:	
Parker, Fremont County	13
Wilfard, Fremont County	26
Bear River and Lake drainage:	
Liberty, Bear Lake County	18
Ovid, Bear Lake County	30
Wood River watershed:	
Corral, Blaine County	24
Boise Basin:	
Atlanta, Elmore County	14

It is evident that there is danger of a deficiency of water in the rivers during the coming spring and summer.

THE RELATION OF TEMPERATURE TO COLOR.

It is quite a common fallacy to say that the darker colors are warmer, whether we speak of clothing or soils. But it is far more proper to say that the darker color is due to the texture and other qualities of the cloth or soil, and that these other qualities (not the color itself) cause the differences as to warmth. In the January report of the Virginia section, Mr. E. A. Evans, Section Director, illustrates this point by a quotation from Johnson's work How Crops Feed, as follows:

"The observations of Malaguti and Durocher prove that the peculiar temperature of the soil is not always so closely related to color as to other qualities. They studied the thermometric characters of the following soils, viz: Garden earth of dark, gray color (a mixture of sand and gravel, with about 5 per cent of humus); a grayish-white quartz sand; a grayish-brown granite sand; a fine light gray clay (pipe clay); a yellow sandy clay; and finally, four lime soils of different physical qualities.

It was found that when the exposure was alike, the dark gray granite sand became the warmest, and next to this the grayish-white quartz sand. The latter, notwithstanding its lighter color, often acquired a higher temperature at a depth of four inches than the former, a fact to be ascribed to its better conducting power. *The black soils never became so warm as the two just mentioned.* After the black soils, the others

[1] On northern slopes.

came in the following order: Garden soil; yellow sandy clay; pipe clay; lime soils having crystalline grains; and lastly, a pulverulent chalk soil."

At noon of a July day when the temperature of the air was 90°, a thermometer placed a little more than 1 inch below the surface of different soils gave the following results:

	Degrees.
In quartz sand	126
In crystalline lime soil	115
In garden soil	114
In yellow sandy clay	100
In pipe clay	94
In chalk soil	87

It would seem that the warmest soils are those that retain the least water, and doubtless something of the slowness with which the fine soils increase in warmth is connected with the fact that they retain much water which in evaporating appropriates and renders latent a large quantity of heat.

METEOROLOGICAL CONGRESS AT PARIS, SEPTEMBER 10-16, 1900.

In addition to the important official international conferences that are occasionally called together by the Permanent International Committee, there are other nonofficial congresses that may be assembled at any time. Such were held at Paris, France, in 1887, and at Chicago, Ill., in 1893. The Chief of the Weather Bureau has just received a circular letter notifying him that the authorities of the exposition at Paris have called an international meteorological congress to be held from the 10th to the 16th of September, 1900, and he has been requested to distribute certain circulars of invitation to those interested in the subject.

We print herewith the translation of the body of the circular, but omit the provisional program of subjects that may be discussed.

Those of our observers, either voluntary or regular, or other of our correspondents who desire to attend this conference, or who desire to simply become members and to receive the volume of proceedings that will eventually be published, should make application to M. Angot, General Secretary of the Committee of Organization, Avenue de l'Alma, No. 12. Money orders for the necessary 20 francs should be made payable to Th. Moureaux, Treasurer of the Congress. They should also in making their application be particular to write their names in full and very distinctly, with their titles and positions and home address, and the titles of communications, if any, that they propose to send in. The forms appropriate to such applications may be obtained from the Editor of the MONTHLY WEATHER REVIEW.

The following is the circular letter above referred to:

REPUBLIC OF FRANCE. MINISTRY OF COMMERCE, INDUSTRY, POSTS, AND TELEGRAPHS. EXPOSITION OF 1900. OFFICE OF THE GENERAL COMMITTEE OF ARRANGEMENTS. INTERNATIONAL CONGRESSES. INTERNATIONAL METEOROLOGICAL CONGRESS. PARIS, SEPTEMBER 10–16, 1900.

SIR: An international congress of meteorology will take place at Paris from September 10 to 16, 1900. We hope that you will be pleased to give it your membership and cooperation.

The International Meteorological Committee, which met recently at St. Petersburg, decided that it would call a meeting of the different committees established by the conference at Paris in 1896, at the same time with the present congress.

These committees are as follows:

Terrestrial magnetism and atmospheric electricity.—President, M. Rücker.

Aeronautics.—President, M. Hergesell.

Study of the clouds.—President, M. Hildebrandsson.

Radiation and insolation.—President, M. Violle.

The first of these committees held an important meeting at Bristol in 1898, an account of which, and the resolutions adopted by it, have been published in the Report of the British Association for the Advancement of Science.

Again, a large number of ascensions, with manned balloons and sounding balloons have been made in various countries for the systematic study of the upper regions of the atmosphere.

Finally, the publication and the discussion of the international observations of clouds made in 1896–97 will probably be accomplished during 1900 for the greater part of the countries that took part therein.

From these various points of view we are justified in counting on communications of the highest interest.

The questions that the congress will be called upon to discuss are not restricted, however, to meteorology so-called; they include, in general, everything that concerns the physics of the globe.

It seems to us that it would be premature, at the present moment, to prepare a detailed program of these different questions, and that it must suffice to have indicated its general character by the accompanying provisional program.

In order to facilitate the publication of the definitive program, we beg that you will kindly send, as soon as possible, and certainly before the 15th of May, 1900, your adhesion to this congress and indicate the questions that you intend to bring up for discussion.

The sessions of the congress and of the committees will be held at the hotel of the Société d'Encouragement, rue de Rennes, No. 44, the same place where the International Conference of 1896 held its meetings.

The price of the subscription is fixed at 20 francs (about $4). The payment of this sum will confer the right to a card of admission and to the volume containing the proceedings of the sessions, as well as the memoirs presented to the congress. We hope that this publication will prove to be of great interest to all meteorologists.

Acceptance of membership and communications relative to the organization or to the program of the congress should be addressed to M. Angot, Secretary-General, Avenue de l'Alma, No. 12, Paris.

Subscriptions may be sent by post office order to M. Moureaux, Treasurer, rue de l'Université, No. 176, Paris.

(Signed) E. MASCART,
President of the Committee on Organization.

A. ANGOT,
Secretary General.

METEOROLOGY AT THE PARIS EXPOSITION.

Early in March Prof. C. F. Marvin, Dr. O. L. Fassig, and Mr. E. G. Johnson, will be ready to sail for Paris in order to establish and take charge of the meteorological exhibit of the Weather Bureau at the Exposition of 1900. This exhibit will be in a special building occupied by the United States Weather Bureau and the United States Post Office Department, and will be located on the Quai d'Orsay on the Seine, north of the Eifel Tower. The post office address will be care of the office of the United States Commissioner, 20 Avenue Rapp, Paris, France.

The representatives of the Bureau have promised to communicate to the Editor occasional notes on matters of meteorological interest, and voluntary observers who visit the Exposition are all invited to cooperate.

In addition to the work at the Exposition it is hoped that Professor Marvin will have an opportunity to make a series of international barometric comparisons, so that the standards used by the Weather Bureau may continue to be in close accord with those recognized by the Permanent International Committee. The important work already described in the MONTHLY WEATHER REVIEW as being done with sounding balloons, not only at Trappes, near Paris, but also at Berlin, Strasburg, St. Petersburg, and elsewhere, will undoubtedly also be specially studied by him if in any way possible consistently with his other duties.

It is interesting to note that apparatus devised for the use of the United States Weather Bureau is being imitated in Europe, and possibly Professor Marvin may find his own devices as made by others on exhibition at Paris.

LECTURES IN THE SCHOOLS.

Mr. E. C. Vose, Section Director, West Virginia, recently gave a talk on meteorology before the senior class of the high